

Claims: I claim:

1. A process for enhancing ambience in audio source signals comprising the steps of:
 - generating a first audio signal;
 - generating a second audio signal;
 - delaying and attenuating said second audio signal to form a third audio signal;
 - summing said third audio signal with said first audio signal to form a fourth audio signal;
 - delaying and attenuating said first audio signal to form a fifth audio signal;
 - subtracting said fifth audio signal from said fourth audio signal to form a sixth audio signal;
 - delaying and attenuating said second audio signal to form a seventh audio signal;
 - subtracting said seventh audio signal from said sixth audio signal to form an eighth audio signal;
 - delaying and attenuating said first audio signal to form a ninth audio signal;
 - and
 - summing said eighth audio signal with said ninth audio signal to form an output signal for one channel of a multiple channel audio system for driving a speaker;

whereby the ambience of one channel of an audio system is enhanced.
2. A process for enhancing ambience in audio source signals in accordance with claim 1 including the steps of:
 - delaying and attenuating said first audio signal to form a tenth audio signal;

subtracting said tenth audio signal from said second audio signal to form an eleventh audio signal;

delaying and attenuating said second audio signal to form a twelfth audio signal;

subtracting said twelfth audio signal from said eleventh audio signal to form a thirteenth audio signal;

delaying and attenuating said first audio signal to form a fourteenth audio signal;

summing said fourteenth audio signal with said thirteenth audio signal to form a fifteenth audio signal;

delaying and attenuating said second audio signal to form a sixteenth audio signal; and

summing said sixteenth audio signal with said fifteenth audio signal to form an output signal for a second channel of a multiple channel audio system for driving a speaker;

whereby the ambience of two channels of an audio system are enhanced.

3. A process for enhancing ambience in audio source signals in accordance with claim 2 in which the step of generating a second audio signal includes generating a copy of said first generated audio signal in a monaural audio system.

4. A process for enhancing ambience in audio source signals in accordance with claim 2 including the steps of:

delaying and attenuating said second audio signal to form a seventeenth audio signal;

inverting said seventeenth audio signal to form an eighteenth audio signal;

delaying and attenuating said first audio signal to form a nineteenth audio signal;

summing said eighteenth and nineteenth audio signals to form a twentieth audio signal;

delaying and attenuating said second audio signal to form a twenty first audio signal; and

summing said twentieth and twenty first audio signals to form a first surround sound channel audio signal.

5. A process for enhancing ambience in audio source signals in accordance with claim 4 including the steps of:

delaying and attenuating said first audio signal to form a twenty second audio signal;

delaying and attenuating said second audio signal to form a twenty third audio signal;

summing said twenty second and twenty third audio signals to form a twenty fourth audio signal;

delaying and attenuating said first audio signal to form a twenty fifth audio signal; and

subtracting said twenty fifth audio signal from said twenty fourth audio signal to form a second surround sound channel audio signal.

6. A process for enhancing ambience in audio source signals in accordance with claim 2 in which the second audio signal is delayed about 30 milliseconds to form the third audio signal.

7. A process for enhancing ambience in audio source signals in accordance with claim 6 in which the first audio signal is delayed about 30 milliseconds to form the tenth audio signal.

8. A process for enhancing ambience in audio source signals in accordance with claim 7 in which the second audio signal is attenuated about 15 decibels to form the third audio signal.
9. A process for enhancing ambience in audio source signals in accordance with claim 8 in which the first audio signal is attenuated about 15 decibels to form the tenth audio signal.
10. A process for enhancing ambience in audio source signals in accordance with claim 9 in which the first audio signal is delayed about 60 milliseconds to form the fifth audio signal.
11. A process for enhancing ambience in audio source signals in accordance with claim 10 in which the second audio signal is delayed about 60 milliseconds to form the twelfth audio signal.
12. A process for enhancing ambience in audio source signals in accordance with claim 11 in which the first audio signal is attenuated about 30 decibels to form the fifth audio signal.
13. A process for enhancing ambience in audio source signals in accordance with claim 12 in which the second audio signal is attenuated about 30 decibels to form the twelfth audio signal.
14. A process for enhancing ambience in audio source signals in accordance with claim 13 in which the second audio signal is delayed about 90 milliseconds to form the seventh audio signal.
15. A process for enhancing ambience in audio source signals in accordance with claim 14 in which the first audio signal is delayed about 90 milliseconds to form the fourteenth audio signal.
16. A process for enhancing ambience in audio source signals in accordance with claim 15 in which the second audio signal is attenuated about 45 decibels to form the seventh audio signal.

17. A process for enhancing ambience in audio source signals in accordance with claim 16 in which the first audio signal is attenuated about 45 decibels to form the fourteenth audio signal.
18. A process for enhancing ambience in audio source signals in accordance with claim 17 in which the first audio signal is delayed about 120 milliseconds to form the ninth audio signal.
19. A process for enhancing ambience in audio source signals in accordance with claim 18 in which the second audio signal is delayed about 120 milliseconds to form the sixteenth audio signal.
20. A process for enhancing ambience in audio source signals in accordance with claim 19 in which the first audio signal is attenuated about 60 decibels to form the ninth audio signal.
21. A process for enhancing ambience in audio source signals in accordance with claim 20 in which the second audio signal is attenuated about 60 decibels to form the sixteenth audio signal.
22. A process for enhancing ambience in audio source signals for a surround sound output comprising the steps of:
 - generating a first audio signal;
 - generating a second audio signal;
 - subtracting said first audio signal from said second audio signal to form a third audio signal;
 - delaying and attenuating said third audio signal to form a fourth audio signal;
 - inverting said fourth audio signal to form a fifth audio signal;
 - delaying and attenuating said third audio signal to form a sixth audio signal;

summing said fifth audio signal with said sixth audio signal to form a seventh audio signal;

delaying and attenuating said third audio signal to form an eighth audio signal;

summing said seventh audio signal with said eighth audio signal to form an output signal for one channel of a multiple channel audio system for driving a speaker;

whereby the ambience of one channel of an audio system is enhanced.

23. A process for enhancing ambience in audio source signals for a surround sound output in accordance with claim 22 including the steps of:

delaying and attenuating said third audio signal to form a ninth audio signal;

delaying and attenuating said third audio signal to form a tenth audio signal;

summing said ninth audio signal with said tenth audio signal to form an eleventh audio signal;

delaying and attenuating said third audio signal to form a twelfth audio signal;

subtracting said twelfth audio signal from said eleventh audio signal to form a surround output signal for a second channel of a multiple channel audio system for driving a speaker;

whereby the ambience of two surround channels of an audio system are enhanced.

24. An audio source ambience enhancing system comprising:

a plurality of audio inputs;

first connected audio delay and attenuation circuits for each audio input and being connected to one of said plurality of audio inputs;

a first summing circuit connected to a second of said plurality of audio inputs and to one of said first connected audio delay and attenuating circuits to sum the signals therefrom;

second connected audio delay and attenuation circuit for each audio input connected to a second of said plurality of audio inputs;

a second summing circuit connected to said second of said plurality of audio inputs and to said second connected audio delay and attenuating circuits to subtract the delayed and attenuated signal from said second audio input signal;

third connected audio delay and attenuation circuits for each audio input and being connected to the second of said plurality of audio inputs;

a third summing circuit connected to a second of said plurality of audio inputs and to one of said third connected audio delay and attenuating circuits to sum the signals therefrom;

fourth connected audio delay and attenuation circuits for each audio input connected to a second of said plurality of audio inputs;

a fourth summing circuit connected to one said second of said plurality of audio inputs and to said fourth connected audio delay and attenuating circuits to subtract the delayed and attenuated signals from said second audio input signal;

whereby an ambience enhancing circuit is provided for an audio system.

25. A process for enhancing ambience in audio source signals comprising the steps of:

generating a first audio signal;

generating a second audio signal;

delaying and attenuating said second audio signal to form a third audio signal;

summing said third audio signal with said first audio signal to form a fourth audio signal;

delaying and attenuating said first audio signal to form a fifth audio signal;

summing said fifth audio signal with said fourth audio signal to form a sixth audio signal;

delaying and attenuating said second audio signal to form a seventh audio signal;

summing said seventh audio signal with said sixth audio signal to form an eighth audio signal;

delaying and attenuating said first audio signal to form a ninth audio signal; and

summing said eighth audio signal with said ninth audio signal to form an output signal for one channel of a multiple channel audio system for driving a speaker;

whereby the ambience of one channel of an audio system is enhanced.

26. A process for enhancing ambience in audio source signals in accordance with claim 25 including the steps of:

delaying and attenuating said first audio signal to form a tenth audio signal;

summing said tenth audio signal with said second audio signal to form an eleventh audio signal;

delaying and attenuating said second audio signal to form a twelfth audio signal;

summing said twelfth audio signal with said eleventh audio signal to

form a thirteenth audio signal;

delaying and attenuating said first audio signal to form a fourteenth audio signal;

summing said fourteenth audio signal with said thirteenth audio signal to form a fifteenth audio signal;

delaying and attenuating said second audio signal to form a sixteenth audio signal; and

summing said sixteenth audio signal with said fifteenth audio signal to form an output signal for a second channel of a multiple channel audio system for driving a speaker;

whereby the ambience of two channels of an audio system are enhanced.